

A57.463: 4/85



STILL LIFE WITH  
FLOWERS



United States  
Department of  
Agriculture

Soil  
Conservation  
Service

Montana  
Agricultural  
Experiment  
Station

Bozeman,  
Montana

# MONTANA WATER SUPPLY OUTLOOK

Snowpack and Streamflow  
Forecasts as of  
April 1, 1985

UNITED STATES DEPARTMENT OF AGRICULTURE  
SOIL CONSERVATION SERVICE  
SNOW SURVEY UNIT  
Federal Bldg., Rm. 443  
10 East Babcock Street  
Bozeman, MT 59716  
OFFICIAL BUSINESS  
PENALTY FOR PRIVATE USE, \$300

THIRD-CLASS BULK RATE  
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PERMIT NO D-267



MONTANA  
1915  
HELENA, MT

U.S. SOIL CONSERVATION SERVICE



## 1935-1985 50 Years of Soil and Water Conservation

Little improvement  
seen statewide

The snowfall pattern set earlier this winter is continuing. The northern half of the state continues to show near average snow cover in the headwater areas while below average snowpack is the rule for southern drainages. There was a little southward migration of the "good" snowline. Likewise, there was a little improvement in the three very low areas near Philipsburg, Bozeman and Red Lodge.

Low elevation snowmelt was observed near the end of March.

The Montana Water Supply Outlook is a publication of the U. S. Soil Conservation Service. The SCS administers the Cooperative Snow Survey Program in cooperation with other federal, state and private agencies, organizations, and individuals.

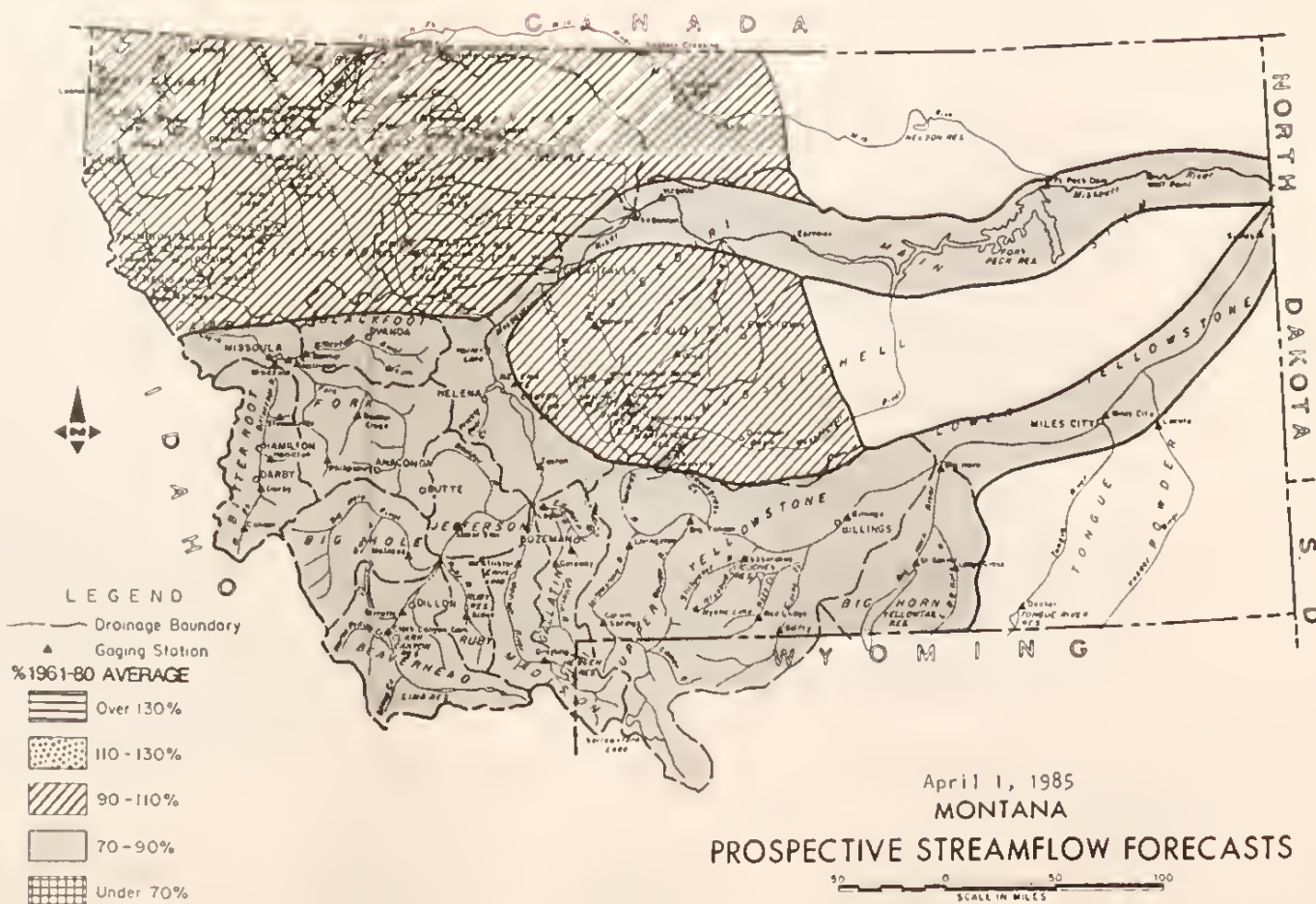
The report is prepared by SCS, Snow Survey and Water Supply Forecast Staffs, Room 443, Federal Building, 10 East Babcock, Bozeman, Montana.

North near average,  
south below average

Spring and summer streamflows are forecast to be 15 to 20 percent less than average for the Missouri River headwaters and along the main stem of the Missouri, for almost all of the Yellowstone River system and for most of the Clark Fork River drainage west of the Divide.

Runoff within 10 percent of average is expected on streams in the Kootenai, Flathead and most downstream tributaries to the Missouri River.

Some shortages of irrigation water supplies are anticipated on the smaller streams across the southern part of the state.



April 1, 1985  
MONTANA  
PROSPECTIVE STREAMFLOW FORECASTS



# Missouri River & Hudson Bay Drainages

## STREAMFLOW FORECASTS

APRIL 1, 1985

BASIN STREAM and/or FORECAST POINT	THIS YEAR		PAST RECORD		THIS YEAR		PAST RECORD	
	FORECAST		THOUSAND ACRE FEET		FORECAST		THOUSAND ACRE FEET	
	Thousand Acre Feet	Percent of Average	Last Year	Average	Thousand Acre Feet	Percent of Average	Last Year	Average
	PERIOD		APRIL - SEPTEMBER		APRIL - JULY			

RED ROCK RIVER near Monida (1)	92.0	89	244	103	86.0	89	212	96.3
BEAVERHEAD RIVER near Grant (2)	136	86	435	158	122	89	337	137
BEAVERHEAD RIVER at Barratts (2)	180	86		209	159	88		180
RUBY RIVER near Alder	87.5	86		101	73.5	86		84.6
BIG HOLE RIVER near Melrose	640	84		760	595	85		698
WILLOW CREEK near Harrison	17.0	85		20.0	15.5	87		17.8
MADISON RIVER near Grayling (3)	415	84	575	496	330	85	440	388
MADISON RIVER near McAllister (4)	705	83	1,114	848	570	85	874	672
GALLATIN RIVER near Gateway	460	84		545	395	85		464
SUM OF EAST+WEST FORKS HYALITE CR. nr Bozeman (5)	23.5	84		28.0	20.9	84		24.2
HYALITE CREEK near Bozeman (6)	38.8	86		44.8	33.8	87		38.7
GALLATIN RIVER at Logan	485	79		611	415	79		523
MISSOURI RIVER at Toston (7)	2,080	82	3,827	2,545	1,845	84	3,179	2,196
SHEEP CREEK near White Sulphur Springs	21.0	96		21.8	18.2	96		19.0
SUN RIVER at Gibson Dam (8)	545	96	336	570	500	96	296	522
BELT CREEK near Monarch	128	96		134	119	97		123
MISSOURI RIVER at Fort Benton (9)	3,250	82		3,980	2,920	84		3,468
TWO MEDICINE CREEK near Browning (10)	226	92		248	215	92		235
RODGER CREEK near Browning	118	90		130	102	90		113
INFLOW SHIFT RESERVOIR near Oupover	79.0	91		86.7	68.7	92		74.7
CUT BANK CREEK at Cut Bank	102	90		114	97.5	90		108
MARIAS RIVER near Shelby	489	90		542	470	91		518
MISSOURI RIVER at Virgelle (11)	3,795	83		4,570	3,425	85		4,030
MISSOURI RIVER near Landusky (11)	4,205	84		4,980	3,370	86		4,383
NORTH FORK MUSSELSHELL RIVER near Oelpine	6.0	94		6.4	5.1	95		5.4
SOUTH FORK MUSSELSHELL RIVER above Martinsdale	57.5	92		62.8	54.7	93		58.9
MISSOURI RIVER below Fort Peck Dam (11)	4,100	83		4,961	3,810	86		4,428
MILK RIVER at Eastern Crossing	79.7	98		81.7				
MILK RIVER at Eastern Crossing (12)	235	95		248				
INFLOW LAKE SAKAKAWEA, ND (11)	10,460	82		12,755	10,400	85		12,239

- (1) Adjusted for storage in Lima Reservoir.
- (2) Adjusted for storage in Lima and Clark Canyon Reservoirs.
- (3) Adjusted for storage in Hebgen Lake.
- (4) Adjusted for storage in Hebgen Lake and Ennis Lake.
- (5) Sum of West Fork Hyalite Creek and East Fork Hyalite Creek above the Reservoir.
- (6) Adjusted for storage in Middle Creek Reservoir.
- (7) Adjusted for storage in Lima, Hebgen, Ennis & Clark Canyon Reservoirs.
- (8) Adjusted for storage in Gibson Reservoir & diversions.
- (9) Adjusted for storage in Lima, Clark Canyon, Hebgen, Ennis, Gibson, Pishkun, Willow Creek & Canyon Ferry Reservoirs.
- (10) Adjusted for storage in Two Medicine Reservoir & diversions in Two Medicine Canal.
- (11) Adjusted for all upstream reservoirs.
- (12) Flow at Eastern Crossing minus St. Mary's Canal.
- (13) Adjusted for storage in Lake Sherburne.

ALL FORECASTS PREPARED IN COOPERATION WITH THE NATIONAL WEATHER SERVICE

### NOTE:

According to the Bureau of Reclamation; although forecasts at this time appear to be near normal - the outlook for water supply is critical because of unusual low storage in Fresno, Nelson and Sherburne.

## SASKATCHEWAN RIVER BASIN

SHIFTCURRENT CREEK at Sherburne (13)	129	100	102	128	110	98	87.4	112
ST. MARY'S RIVER near Babb (13)	470	97		487	404	97		416

## Missouri headwaters remain low

The Missouri River headwaters above Canyon Ferry Reservoir continue to show below average snowpack while all other areas are generally about average. The Bear Paw Mountains, south of Havre, still have above average snow water content even though some melt has occurred at lower elevations.

Snow in the Missouri headwaters is generally in the 80 to 90 percent of average range except for the Bridger Mountains near Bozeman where the winter's accumulation is about 70 percent of average.

Snow in the lower elevations began melting near the end of March.

## SUMMARY of SNOW MEASUREMENTS

(COMPARISON WITH PREVIOUS YEARS)

RIVER BASIN and/or SUB-WATERSHED	Number of Courses Averaged	THIS YEAR'S SNOW WATER AS PERCENT OF	
		Last Year	Average
Beaverhead	31	94	87
Ruby	13	79	83
Big Hole	29	101	86
Boulder	15	94	86
Jefferson	88	94	86
Madison	34	87	87
Gallatin	24	81	77
Missouri Headwater	146	90	85
West-side Missouri (Toston-Cascade)	11	121	92
Smith-Belt-Arrow	11	103	91
Missouri Main-stem	22	110	92
Teton & Sun	12	213	95
Marias	7	153	90
Marias-Teton-Sun	19	177	92
Judith-Musselshell	19	93	94
Milk	11	157	106
Bear Paws	6	129	143
Missouri (Total)	217	99	88
Saskatchewan			
St. Mary's	7	156	96
Row River in Alberta	14	101	82

## WATER SUPPLY OUTLOOK

Expressed as "Poor, Fair, Average, Excellent" With Respect to Usual Supply

STREAM or AREA	Flow Period	
	Spring Season	Late Season
Beaverhead	Avg	Fair
Ruby	Avg	Fair
Big Hole	Avg	Fair
Boulder	Avg	Avg
Jefferson	Avg	Fair
Madison	Avg	Fair
Gallatin	Avg	Fair
West-Side Missouri	Avg	Avg
Smith-Belt	Avg	Avg
Sun	Avg	Avg
Teton	Avg	Avg
Marias	Avg	Avg
Judith	Avg	Avg
Musselshell	Avg	Avg
Milk	Avg	Fair
Bear Paws	Exc	Avg
St. Mary's	Avg	Avg

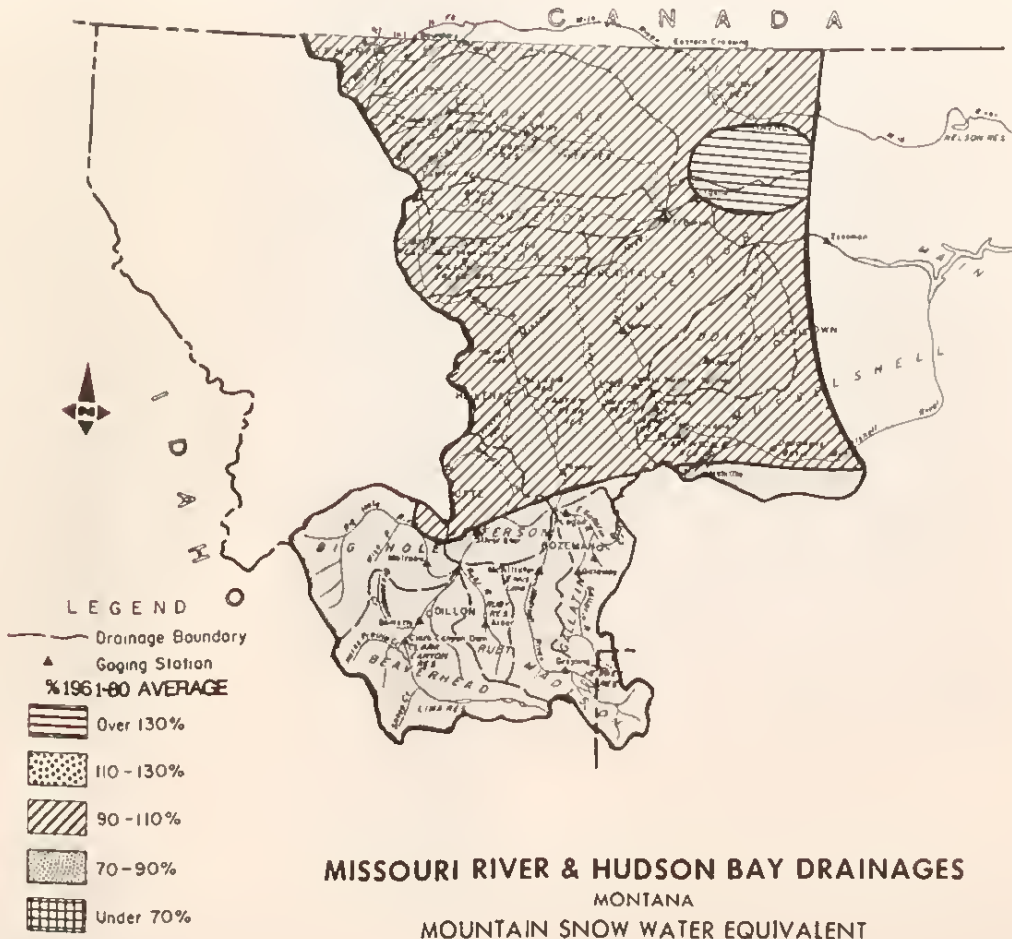
## Little change in streamflow forecasts

Forecasts of spring and summer streamflows are similar to those issued last month.

Most of the streams in the headwaters of the Missouri are forecast to produce around 80 to 85 percent of average runoff. Downstream tributaries are expected to have flows that are near to 10 percent below average. Some increase in streamflows was observed in late March and early April as temperatures warmed and melted some of the low elevation snowpack.

Runoff in the main stem of the Missouri should be around 80 to 85 percent average.

Some shortages of mid- and late season irrigation water supplies are expected in the southwest. There are also some shortages anticipated along the Milk River where reservoir storage is well below average.





## STREAMFLOW FORECASTS

- (1) Adjusted for storage in Mystic Lake.
- (2) Adjusted for storage in Cooney Reservoir.
- (3) Adjusted for storage in Buffalo Bill, Boysen, Bull Lake, Pilot Butte and Bighorn Reservoirs
- (4) Adjusted for storage in Bull Lake, Buffalo Bill, Boysen, Pilot Butte, Bighorn and Tongue River Reservoirs.
- (5) Adjusted for reservoirs shown in (4) and diversions into the Lower Yellowstone Canal.

**WATER SUPPLY OUTLOOK** Expressed as "Poor, Fair, Average, Excellent" With Respect to Usual Supply

Some water shortages possible

April through September runoff is forecast to be 15 to 20 percent below average on most of the Yellowstone River drainages. Some mid- and late season shortages of irrigation water supplies are expected on smaller streams.

Most streams started rising near the end of March as temperatures warmed and low elevation snow began to melt.

## Snowpack still below average

This season's accumulation of water in the snowpack is below average for all of the Yellowstone River headwaters and tributaries. Most areas have about 80 to 85 percent of their usual snowpack.

Around Red Lodge, snowpack levels continue to be lower than other parts of the Yellowstone. In this area, the snow is only 70 to 75 percent of average.

Some melting of low elevation snow has begun.

### SUMMARY of SNOW MEASUREMENTS

(COMPARISON WITH PREVIOUS YEARS)

RIVER BASIN and/or SUB-WATERSHED		Number of Courses Averaged	THIS YEAR'S SHOW WATER AS PERCENT OF	
			Last Year	Average of Years
Upper Yellowstone				
ab Livingston ..	20	111	82	
Shields .....	10	74	76	
Boulder &				
Stillwater .....	11	114	85	
Rock Creek &				
Clark's Fork ..	16	106	81	
Yellowstone (ab				
Bighorn River) ..	57	103	81	
Bighorn/Wyoming ..	30	87	74	
Little Bighorn ..	3	76	73	
Tongue .....	9	79	78	
Powder .....	5	76	72	
Yellowstone				
(Total) .....	101	96	79	



MARCH 1985

Source: NWS  
Great Falls, MT



SNOW SURVEY DATA

SNOW COURSE	ELEVATION	DATE	SNOW DEPTH	WATER CONTENT	LAST YEAR	AVERAGE 1961-80
MONTANA						
ABUNDANCE LAKE	8800	3/29/85	64	18.0	18.3	22.0
AMERDSE	6480	3/28/85	47	13.2	12.1	14.1
ARCH FALLS	7350	3/26/85	43	11.6	11.8	13.8
ASHLEY DIVIOE	4820	3/28/85	26	7.7	4.3	6.1
ASHLEY LAKE	4000	3/28/85	26	7.3	3.7	5.6
BADGER PASS	6900	4/02/85	92	34.2	26.0	40.4
BADGER PASS BUTYL	6900	4/01/85	---	28.8	21.8	37.0
BALD EAGLE PEAK	5700	3/25/85	158	65.6	44.2	62.9
BALO RIDGE	7500	3/29/85	58	13.6	15.6	14.2
BANFIELD MOUNTAIN	5600	3/25/85	60	22.1	11.4	24.5
BANFIELD MTN BUTYL	5600	4/01/85	---	18.3	10.7	19.8
BARRE CREEK	5500	3/28/85	110	45.1	29.9	48.9
BARRE MIDWAY	4600	3/28/85	107	39.3	20.9	38.1
BARRE TRAIL	3800	3/28/85	38	12.5	1.0	9.5
BARKER LAKES	8250	4/03/85	53	15.2	13.0	16.4
BARKER LAKES BUTYL	8250	4/01/85	---	15.9	14.4	16.9
BASIN CREEK	7180	3/27/85	44	9.5	8.4	8.5
BASIN CREEK METAL	7180	4/01/85	---	8.7	8.1	8.1
BASSOO PEAK	5150	4/01/85	39	12.2	4.1	11.2
BEAGLE SPRINGS	8850	3/30/85	34	7.4	8.6	9.5
BEAGLE SPGS METAL	8850	4/01/85	---	7.5	9.2	9.5
BEAR BASIN	8150	3/27/85	61	16.2	23.0	22.3
BEAR PAW SKI AREA	5200	3/29/85	38	11.2	8.4	7.7
BEAVER LAKE	5900	4/02/85	61	21.4	14.0	24.8
BERRY MEADOW	7000	3/27/85	30	7.1	8.0	8.3
BIG CREEK	6750	4/03/85	107	40.7	42.0	47.2
BIG SKY	7700	4/01/85	53	16.6	18.2	16.6
BIG SKY MEADOW	6350	3/27/85	39	8.5	11.1	10.2
BIG SNOWY	7150	3/25/85	66	22.3	28.8	23.1
BLACK BEAR	7950	3/25/85	103	38.0	37.1	43.9
BLACK BEAR BUTYL	7950	4/01/85	---	36.5	32.9	39.0
BLACK MOUNTAIN	7750	4/02/85	55	15.7	16.5	16.7
BLACK PINE	7100	3/29/85	39	10.2	10.4	14.7
BLACK PINE BUTYL	7100	4/01/85	---	11.1	12.1	15.4
BLOODY DICH	7600	3/29/85	47	12.6	12.0	14.4
BLOODY DICH BUTYL	7550	4/01/85	---	11.9	11.6	12.9
BLUE LAKE	5900	4/02/85	67	24.6	15.8	27.0
BOTS SOTS	7750	3/27/85	28	7.5	8.6	8.6
BOULDER MOUNTAIN	7950	3/25/85	61	19.6	20.8	20.2
BOULDER MTN BUTYL	7950	4/01/85	---	19.7	22.0	22.7
BOX CANYON	6670	3/30/85	45	11.1	6.9	13.2
BOX CANYON METAL	6700	4/01/85	---	9.0	4.3	11.2
BRANHAM LAKES	8850	3/27/85	87	26.0	32.6	31.5
BRIDGER BOWL	7250	3/25/85	57	18.8	27.1	29.2
BRIDGER BOWL BUTYL	7250	3/25/85	---	17.9	27.2	27.7
BRISTOW CREEK	3900	3/25/85	29	11.4	.0	11.4
BRUSH CREEK TIMBER	5000	3/29/85	40	11.4	5.0	10.3
BULL MOUNTAIN	6600	3/29/85	27	6.8	6.1	6.5
CABIN CREEK	5200	3/29/85	30	7.2	.9	7.0
CALL ROAD	8050	3/30/85	42	9.7	13.3	13.0
CALVERT CREEK	6430	3/28/85	40	9.8	9.1	12.2
CALVERT CREEK BUTYL	6430	4/01/85	---	8.0	6.7	9.3
CAMP MISERY	6400	3/26/85	132	52.4	53.5	50.0

SNOW COURSE	ELEVATION	DATE	SNOW DEPTH	WATER CONTENT	LAST YEAR	AVERAGE 1961-80
CAMP SENIA	7890	3/27/85	20	5.1	7.2	7.4
CARROT BASIN	9000	3/29/85	92	28.9	32.2	38.6
CARROT BASIN BUTYL	9000	4/01/85	---	23.2	27.3	29.9
CASHE CREEK	7800	4/01/85	30	7.4	11.4	--
CASHE CREEK METAL	7800	4/01/85	---	8.4	9.1	9.3
CEDAR GROVE	3760	3/25/85	50	17.1	.0	13.2
CHESSMAN RESERVOIR	6200	3/28/85	22	5.6	3.4	3.0
CHICKEN CREEK	4060	3/26/85	40	13.4	10.0	15.5
CLOVER MEADOW	8600	3/30/85	59	16.0	18.9	19.1
CLOVER MEADOW METAL	8800	4/01/85	---	15.4	20.3	17.9
COLE CREEK	7850	4/01/85	49	13.6	17.6	18.9
COLE CREEK BUTYL	7850	4/01/85	---	13.1	18.0	17.6
COLLEY CREEK	6300	3/28/85	31	7.1	6.4	9.4
COMBINATION	5600	3/28/85	23	4.6	5.4	6.6
COMBINATION BUTYL	5600	4/01/85	---	5.8	4.9	6.6
COOKE STATION	8150	3/28/85	61	17.4	14.8	21.0
COPPER BOTTOM	5200	4/02/85	36	12.4	6.6	11.4
COPPER BOTTOM BUTYL	5200	4/01/85	---	12.9	8.1	13.3
COPPER CAMP BUTYL	6950	4/01/85	---	29.3	19.5	39.3
COPPER CAMP	6950	4/02/85	65	26.1	19.1	32.8
COPPER CREEK	5700	4/02/85	38	14.0	8.5	15.5
COPPER LAKE CREEK	6100	4/02/85	59	22.9	14.4	25.2
COPPER MOUNTAIN	7700	3/25/85	42	9.5	11.4	12.2
COTTONWOOD CREEK	6400	3/29/85	43	10.6	--	9.0
COYOTE HILL	4200	3/25/85	34	11.3	5.0	10.4
CREVICE MOUNTAIN	8400	3/29/85	40	10.0	9.3	11.5
CRISTAL LAKE	6050	3/25/85	49	13.8	19.0	15.1
CRISTAL LAKE METAL	6050	4/01/85	---	16.8	17.8	14.3
CRAZY CREEK LAKE	8400	3/30/85	48	12.5	14.9	15.4
CRAZY PEAK	7600	3/25/85	40	9.4	8.4	12.2
CRAZY CREEK	5780	3/28/85	44	11.4	10.9	12.7
CRAZY CREEK METAL	5780	4/01/85	---	10.8	9.4	14.4
DARKHORSE LAKE	8600	3/27/85	75	21.9	25.7	28.9
DARKHORSE LK. METAL	8700	4/01/85	---	18.6	24.6	25.2
DAVIS CREEK	5400	3/25/85	62	21.6	15.0	26.2
DEADMAN CREEK	6450	3/28/85	47	11.5	10.6	12.2
DEADMAN CREEK BUTYL	6450	4/01/85	---	11.6	9.6	11.3
DESERT MOUNTAIN	5600	3/26/85	52	17.7	12.5	16.8
DEVILS SLIDE	8100	3/26/85	63	17.4	23.0	23.7
DISCOVERY BASIN	7050	3/28/85	37	9.8	11.7	11.1
DIVIDE	7800	3/30/85	37	10.1	12.5	12.0
DIVIDE BUTYL	7800	4/01/85	---	9.8	12.2	12.2
DIX HILL	6400	3/31/85	35	10.9	11.5	11.4
DUPUYER CREEK BUTYL	5750	4/01/85	---	13.0	5.2	--
EAGLE CREEK	7400	3/27/85	47	13.0	14.2	15.5
EAST BOULDER S	7500	4/02/85	84	27.0	23.0	32.8
EAST FORK R.S.	5400	3/25/85	22	6.1	4.4	6.2
EL DORADO MINE	7800	3/26/85	63	17.3	19.2	22.8
EL HORN SPRINGS	7800	3/29/85	41	8.0	7.5	9.9
ELK PEAK	8000	3/26/85	51	14.8	16.7	18.3
EMERY CREEK	4350	3/26/85	49	18.2	12.0	16.3
EMERY CREEK BUTYL	4350	4/01/85	---	19.1	11.6	16.5
FATTY CREEK	5500	4/03/85	69	25.8	22.0	25.0
FISH CREEK	8000	3/27/85	46	9.8	9.4	10.2
FISHER CREEK	9100	3/28/85	100	36.1	29.3	41.1
FISHER CREEK BUTYL	9100	4/01/85	---	30.5	26.7	38.0
FLUE-BUI	5700	4/02/85	26	8.5	.0	7.7
FLATTOP MTN BUTYL	6300	4/01/85	---	44.5	37.6	49.7

SNOW COURSE	ELEVATION	DATE	SNOW DEPTH	WATER CONTENT	LAST YEAR	AVERAGE 1961-80
FLEECER RIDGE	7500	3/29/85	41	11.2	8.4	12.0
FOOLHEN	8280	3/29/85	53	14.2	13.7	18.3
FOREST LAKE	6400	3/27/85	42	12.0	10.3	13.7
FOUR MILE	6900	3/26/85	39	9.6	9.0	9.4
FOURTH OF JULY	3450	3/28/85	37	11.8	3.6	9.2
FRED BURR PASS	8000	4/01/85	67	19.6	25.4	26.7
FREIGHT CREEK	6000	4/02/85	44	14.8	8.7	16.7
FRIDAY HILL	4620	3/28/85	66	21.5	13.0	24.5
FROHNER MEADOWS	6480	3/28/85	24	6.4	6.8	8.9
FROHNER MDWS BUTYL	6480	4/01/85	---	8.2	8.3	8.8
GARVER CREEK	4250	3/25/85	34	11.2	5.3	11.3
GARVER CREEK BUTYL	4250	4/01/85	---	10.0	4.2	10.2
GIBBONS PASS	7100	3/25/85	68	22.0	22.3	24.2
GOAT MOUNTAIN	7000	3/30/85	39	11.1	5.3	11.5
GOLD CREEK LAKE	7200	3/26/85	48	12.8	15.5	17.0
GOLD STONE	8100	3/29/85	55	15.4	16.6	18.2
GRASSHOPPER	7000	3/26/85	31	7.8	6.2	6.4
GRAVE CREEK	4300	3/25/85	53	18.2	11.8	18.3
GRAVE CRY BUTYL	4300	4/01/85	---	18.6	11.6	17.1
GRIFFIN CREEK DIVIOE	5150	4/01/85	40	12.8	6.6	12.1
GUNSIGHT LAKE	6300	4/03/85	102	37.1	31.9	41.6
HAND CREEK	5030	3/29/85	49	14.9	9.2	15.0
HAND CREEK BUTYL	5030	4/01/85	---	13.1	8.2	16.0
HAWKINS LAKE	6450	3/25/85	73	28.2	19.7	33.5
HAWKINS LAKE BUTYL	6450	4/01/85	---	22.6	16.2	30.9
HEART LAKE TRAIL	4800	3/29/85	69	25.8	15.8	23.0
HEBGEN DAM	6550	3/28/85	44	10.6	13.0	12.5
HELL ROARING DIVIDE	5770	4/01/85	34	30.8	24.0	33.1
HERRIG JUNCTION	4850	3/26/85	71	24.4	18.0	28.6
HOLERDOK	4530	4/03/85	17	9.6	4.2	10.2
HODD MEADOW	6600	3/26/85	37	9.2	10.3	12.0
HODDODD BASIN	6050	3/29/85	124	52.4	39.3	52.7
HODDODD BASIN BUTYL	6050	4/01/85	---	43.4	34.7	47.1
HODDODD CREEK	5900	3/29/85	113	46.4	36.2	49.2
INDEPENDENCE	7850	3/30/85	66	16.8	13.2	19.6
INTERGAARD	6450	3/26/85	30	6.4	7.5	9.3
JAHNKE LAKE TRAIL	7200	3/29/85	45	11.2	8.8	10.2
JOHNSON PARK	6450	3/26/85	23	5.5	5.1	7.7
KEELER CREEK	3300	3/25/85	45	19.0	.0	11.3
KINGS HILL	7500	3/28/85	57	15.2	13.6	15.2
KISHENEHN	3890	3/30/85	29	7.2	1.4	7.8
KIWANIS CAMP	3720	3/29/85	3	.6	.0	1.2
KRAFT CREEK METAL	4750	4/01/85	---	13.6	9.7	12.4
LAKE CREEK	6100	3/30/85	31	7.0	9.5	9.2
LAKEVIEW CANYON	6930	3/25/85	50	11.2	8.6	13.2
LAKEVIEW RIDGE	7400	3/25/85	47	10.5	8.1	11.6
LAKEVIEW RDG. METAL	7400	4/01/85	---	13.4	11.2	13.1
LEMHI PASS	7480	3/30/85	34	9.1	9.2	9.6
LEMHI RIDGE	8100	3/30/85	40	10.0	11.0	11.0
LEMHI RIDGE BUTYL	8100	4/01/85	---	9.8	12.3	11.4
LICK CREEK	6860	3/26/85	42	9.9	11.9	11.0
LICK CREEK BUTYL	6860	4/01/85	---	9.6	11.0	10.1
LITTLE PARK	7400	3/27/85	54	12.9	17.0	17.2
LOGAN CREEK	4300	3/29/85	30	7.9	3.6	7.7
LONE MOUNTAIN	8880	4/01/85	68	23.4	23.4	23.9
LOST HORSE	5940	3/27/85	81	29.4	27.2	34.4
LOST SOUL	4800	3/25/85	48	15.9	8.0	16.0
LOWER TWIN	7900	3/26/85	69	21.4	22.4	22.8
LOWER TWIN METAL	7900	4/01/85	---	16.4	20.3	21.3

SNOW COURSE	ELEVATION	DATE	SNOW DEPTH	WATER CONTENT	LAST YEAR	AVERAGE 1961-80
LUBRECHT FLUME	4680	4/01/85	6	2.2	.0	4.2
LUBRECHT FLUME BUTYL	4680	4/01/85	---	3.5	.0	5.5
LUBRECHT FOREST NO 3	5450	3/29/85	20	5.2	4.8	7.5
LUBRECHT FOREST NO 4	4650	3/29/85	6	1.6	.0	2.6
LUBRECHT FOREST NO 5	4040	3/29/85	4	1.3	.0	2.8
LUBRECHT HYDROPLOT	4200	4/01/85	5	2.4	.0	5.9
MADISON PLATEAU	7750	3/25/85	82	21.4	20.0	24.5
MADISON PLT BUTYL	7750	3/25/85	---	22.4	18.0	25.2
MANY GLACIER	4900	3/30/85	64	21.2	13.2	21.7
MANY GLACIER BUTYL	4900	4/01/85	---	18.6	12.1	19.3
MARIAS PASS	5250	3/31/85	56	20.1	11.4	18.5
MAYNARD CREEK	6210	3/25/85	41	12.5	15.3	16.9
MAYNARD CREEK BUTYL	6210	3/25/85	---	8.2	12.2	13.3
MIDDLE HILL CREEK	7850	3/27/85	57	14.3	19.7	17.8
MILL CREEK	7500	3/28/85	43	10.2	12.0	14.5
MINERAL CREEK	4000	3/27/85	52	18.2	11.8	18.8
MONUMENT PEAK	8850	3/30/85	84	24.2	19.4	28.2
MONUMENT PEAK METAL	8850	4/01/85	---	18.1	16.7	24.3
MOULTON RESERVOIR	6850	3/31/85	36	8.1	8.8	7.0
MOUNT LOCKHART	6400	3/31/85	66	22.6	14.2	24.4
MT LOCKHART BUTYL	6400	4/01/85	---	19.9	12.1	23.1
MUDD LAKE	7650	3/28/85	60	17.4	16.0	21.5
MULE CREEK	8300	3/29/85	53	13.2	12.0	16.0
MULE CREEK METAL	8300	4/01/85	---	13.8	12.7	15.6
NEVADA CREEK	6480	4/02/85	43	14.5	10.6	15.0
NEVADA CREEK METAL	6480	4/01/85	---	13.7	7.8	14.3
NEW WORLD	6900	3/25/85	45	13.5	16.7	16.5
NEWTON MOUNTAIN	5600	4/05/85	90	36.0	22.5	39.2
NEZ PERCE CAMP	5650	3/26/85	44	13.7	13.6	15.9
NEZ PERCE CAMP BUTYL	5650	4/01/85	---	14.2	13.7	15.9
NEZ PERCE CREEK	5600	3/25/85	23	5.2	7.8	7.4
NEZ PERCE PASS	6570	3/26/85	43	14.4	17.0	18.3
NOISY BASIN	6040	3/26/85	124	46.8	50.1	46.6
NOISY BASIN BUTYL	6040	4/01/85	---	41.5	45.9	40.5
NORTH FORK ELK CREEK	6250	3/30/85	37	11.1	9.6	13.2
N. FORK ELK CRK BUTYL	6250	4/01/85	---	10.7	10.0	13.1
NORTH FORK JOCKO	6350	4/03/85	97	35.9	39.8	47.6
NORTH MEADOW	7500	3/26/85	40	10.6	9.6	9.3
NORTHEAST ENTRANCE	7350	4/01/85	29	7.5	6.5	10.1
N.E. ENTRANCE BUTYL	7350	4/01/85	---	8.0	7.3	10.0
NOTCH	8500	3/30/85	50	12.9	20.8	17.2
OPHIR PARK	7150	3/31/85	55	17.8	17.9	18.5
PALISADE CREEK	8250	3/28/85	77	27.3	24.4	31.0
PETERSON MEADOWS	7200	3/27/85	45	10.8	11.6	11.2
PETERSON MOW BUTYL	7200	3/27/85	---	10.1	11.1	11.6
PICKET PIN D	9450	4/02/85	69	23.5	20.5	27.5
PICKET PIN LOWER	6200	3/28/85	20	5.4	5.4	2.4
PICKET PIN MIDDLE	7250	3/28/85	39	12.4	11.2	14.1
PICKET PIN UPPER	8100	3/28/85	61	17.8	19.2	22.2
PICKFOOT CREEK	6650	3/25/85	34	10.5	9.5	12.1
PICKFOOT CRK METAL	6650	4/01/85	---	8.5	9.7	13.2
PINE CREEK	5930	3/21/85	73	26.6	15.6	28.7
PINE CREEK BUTYL	5930	4/01/85	---	30.0	17.4	30.1
PIESTONE PASS	7240	3/25/85	27	5.8	5.0	6.1
PLACER BASIN F	8850	4/02/85	52	19.0	18.0	22.4
PLACER BASIN METAL	8833	4/01/85	---	15.8	15.6	17.9
POORMAN CREEK	5100	3/25/85	96	38.5	24.2	36.9
POORMAN CRK BUTYL	5100	4/01/85	---	38.0	21.4	33.8



SNOW COURSE	ELEVATION	DATE	SNOW DEPTH	WATER CONTENT	LAST YEAR	AVERAGE 1961-80
PORCUPINE	6500	3/29/85	40	8.4	9.1	8.6
PORCUPINE BUTYL	6500	4/01/85	---	7.7	8.8	8.0
POTOMAGETON PARK	7150	3/28/85	46	11.6	14.6	15.4
REO MOUNTAIN	6000	4/01/85	56	17.5	11.8	19.9
REO TOP	5260	4/04/85	76	29.6	17.8	32.1
ROCK CREEK	5600	3/25/85	45	13.4	17.0	10.8
ROCK CREEK MEADOW	8160	3/25/85	57	15.4	18.5	24.8
ROCKER PEAK	8000	3/27/85	46	12.8	13.6	16.2
ROCKER PEAK BUTYL	8000	4/01/85	---	12.7	11.3	15.9
ROCKY BOY	4700	3/29/85	23	7.8	6.4	5.0
ROCKY BOY BUTYL	4700	3/29/85	---	6.6	6.2	5.0
SACAJAWEA	6550	3/25/85	35	10.0	16.7	15.7
SADDLE MOUNTAIN	7940	3/25/85	72	23.2	23.2	26.5
SADDLE MTN BUTYL	7900	4/01/85	---	22.6	24.2	27.0
SAND BASIN LOWER	6480	3/28/85	44	11.9	9.8	15.6
SENTINEL CREEK	8300	3/28/85	68	18.4	21.8	25.3
SHOWER FALLS	8100	3/26/85	64	18.8	24.3	24.9
SHOWER FALLS BUTYL	8100	4/01/85	---	20.6	26.1	24.5
SILVER RUN	6630	3/27/85	15	4.0	6.0	6.6
SILVER RUN BUTYL	6630	4/01/85	---	4.4	7.2	6.4
SKALKAHU SUMMIT	7250	3/28/85	68	23.0	20.7	27.6
SKALKAHU SUMMIT BUTYL	7260	4/01/85	---	20.1	19.5	27.9
SKYLARK TRAIL METAL	6200	4/01/85	---	34.6	27.7	35.8
SLAG-A-MELT LAKE	8750	3/29/85	68	20.2	24.5	27.3
SLIDE ROCK MOUNTAIN	7100	3/27/85	47	13.6	14.6	18.1
SMUGGLER MINE	6960	3/27/85	46	9.1	13.5	10.9
SOUTH FORK SHIELOS	8100	4/01/85	75	22.6	30.0	26.4
S.F.K. SHIELOS BUTYL	8100	4/01/85	---	16.2	21.9	18.5
SPOTTED BEAR MTN.	7000	4/03/85	44	15.4	11.4	15.9
SPUR PARK	8100	3/28/85	74	21.0	19.6	22.7
SPUR PARK BUTYL	8100	4/01/85	---	22.1	19.8	23.0
STAHL PEAK	6030	3/25/85	97	38.3	34.7	41.1
STAHL PEAK BUTYL	6030	4/01/85	---	32.0	28.5	35.3
STAR LAKE E	9650	4/02/85	105	40.0	29.5	46.6
STEMPLE PASS	6600	3/26/85	41	12.2	7.2	11.2
STORM LAKE	7780	3/27/85	56	12.8	15.3	14.6
STRYKER BASIN	6180	3/26/85	82	28.1	27.0	37.0
STUART MILL	6500	3/26/85	28	6.0	6.4	7.3
STUART MOUNTAIN	7400	4/03/85	77	29.0	34.0	34.0
SUCKER CREEK	3960	3/29/85	4	.8	.0	.4
TAYLOR ROAD	4080	3/29/85	17	4.8	3.6	2.9
TEN MILE LOWER	6600	3/27/85	31	8.2	6.7	8.1
TEN MILE MIDDLE	6800	3/27/85	45	11.5	10.2	12.8
TEN MILE UPPER	8000	3/27/85	49	13.4	12.4	14.8
TEPEE CREEK	8000	3/30/85	54	15.2	16.1	16.3
TEPEE CREEK BUTYL	8000	4/01/85	---	11.7	14.5	13.6
TIMBERLINE CREEK	8850	3/27/85	45	12.0	12.8	15.8
TRAIL CREEK	7090	3/30/85	34	8.1	8.6	9.2
TRINKUS LAKE	6100	4/03/85	113	44.5	43.0	45.1
TRUMAN CREEK	4060	3/29/85	22	6.4	1.2	2.2
TV MOUNTAIN	6800	4/03/85	52	17.8	19.4	20.3
TWELVEMILE CREEK	5600	3/27/85	57	20.4	17.3	23.4
TWELVEMILE BUTYL	5600	4/01/85	---	17.8	14.7	20.1
TWENTY-ONE MILE	7150	3/29/85	56	15.2	14.4	18.9
TWIN CREEKS	3580	4/03/85	32	12.3	5.1	11.6
TWIN LAKES	6510	3/27/85	100	37.5	35.4	44.1
TWIN LAKES BUTYL	6400	4/01/85	---	34.6	31.1	42.4
UPPER HOLLAND LAKE	6200	4/03/85	91	32.4	30.6	37.5

SNOW COURSE	ELEVATION	DATE	SNOW DEPTH	WATER CONTENT	LAST YEAR	AVERAGE 1961-80
WALORON	5600	3/31/85	35	10.8	3.8	11.2
WALORON BUTYL	5600	4/01/85	---	11.7	6.0	10.1
WARM SPRINGS	7800	4/01/85	56	15.7	19.1	21.1
WARM SPRINGS BUTYL	7800	4/01/85	---	15.7	20.9	23.2
WEASEL DIVIDE	5450	3/25/85	88	34.7	23.3	35.4
WEST YELLOWSTONE	6700	3/30/85	50	12.8	9.6	12.5
WEST YELL'ST BUTYL	6700	3/30/85	---	10.4	8.1	10.4
WHISKEY CREEK	6800	3/25/85	65	21.2	16.7	21.9
WHISKEY CREEK BUTYL	6800	4/01/85	---	18.2	13.1	18.3
WHITE MILL	8700	3/28/85	79	25.0	21.0	29.6
WHITE MILL BUTYL	8700	4/01/85	---	21.8	18.6	26.3
WHITE PINE RIDGE	8850	3/30/85	23	4.5	7.1	5.8
WILLOW CREEK	6500	4/01/85	30	9.4	10.0	9.7
WOOD CREEK	5960	4/02/85	40	13.4	4.7	14.8
WOOD CREEK METAL	5960	4/01/85	---	16.2	4.5	15.2
WRONG CREEK	5700	3/28/85	40	13.5	7.0	15.0
WRONG RIDGE	6800	3/28/85	54	18.5	11.8	20.9

ALBERTA

AKAMINA	CAN.	5810	4/01/85	78	25.0	12.1	--
ALLISON PASS	CAN.	6490	3/29/85	56	16.3	12.1	19.5
BOW RIVER	CAN.	5080	4/01/85	28	6.9	5.6	8.3
BOW RIVER SUMMIT	CAN.	6660	4/01/85	44	12.4	13.0	14.4
CHATEAU LAWN	CAN.	5710	4/01/85	32	8.3	7.7	10.8
CUTHEAD LAKE	CAN.	7250	4/01/85	44	12.2	13.0	15.3
HIGHWOOD SUMMIT	CAN.	7250	4/01/85	48	12.8	13.0	15.4
CABLE MOUNTAIN	CAN.		4/01/85	24	5.1	--	--
GARDNER HEAD.	CAN.		4/01/85	86	30.8	--	--
KATHERINE LAKE	CAN.	7810	4/01/85	46	13.0	15.3	--
LARCH VALLEY	CAN.	7740	4/01/85	44	11.9	14.9	17.0
LEE CREEK O	CAN.		4/01/85	31	8.7	--	8.4
LEE CREEK E	CAN.		4/01/85	38	11.0	--	10.2
LEE CREEK F	CAN.		4/01/85	20	6.5	--	7.0
LEE CREEK F	CAN.		4/01/85	23	6.3	--	6.6
LEE CREEK O	CAN.	4890	4/01/85	28	7.8	4.1	6.9
LOST CREEK	CAN.		4/01/85	63	17.9	--	--
LT. ELBOW SUMM	CAN.	7090	4/01/85	45	12.1	9.2	11.3
MARMOT-JASPER	CAN.		4/01/85	31	7.8	--	9.7
MCCONNELL CREEK	CAN.		4/01/85	26	5.2	--	--
MIDDLE DRYWOOD	CAN.	5150	4/01/85	6	1.6	1.4	1.9
MIRROR LAKE	CAN.	6590	4/01/85	31	8.3	9.4	11.8
MIST CREEK	CAN.	5740	4/01/85	29	7.4	5.9	7.8
MOUNT SKOKI	CAN.	6740	4/01/85	40	10.4	12.2	13.5
MUD LAKE	CAN.	6200	4/01/85	43	12.0	10.1	12.6
NIGEL CREEK	CAN.	6400	4/01/85	45	17.1	--	16.5
PIFESTONE UPPER	CAN.	5300	4/01/85	30	7.7	6.0	8.3
PTARMIGAN HUT	CAN.	7150	4/01/85	46	13.3	14.8	16.3
RACEHORSE CREEK	CAN.		4/01/85	60	19.0	--	--
SUNSHINE VILLAGE	CAN.	7300	4/01/85	59	16.8	18.4	24.8
SUNWAPT FALLS	CAN.	4590	4/01/85	26	6.4	--	7.8
TENT RIDGE	CAN.		4/01/85	46	13.0	--	--
THREE ISLE LAKE	CAN.	7090	4/01/85	61	20.2	21.4	--
W.CASTLE (BUSH)	CAN.	4990	4/01/85	55	18.1	8.9	--
WILKINSON BUSH	CAN.	6490	4/01/85	40	9.4	5.4	8.6
WILKINSON OPEN	CAN.	6490	4/01/85	30	6.2	3.9	7.2

SNOW COURSE		ELEVATION	DATE	SNOW DEPTH	WATER CONTENT	LAST YEAR	AVERAGE 1961-80
BRITISH COLUMBIA							
BEAVER FOOT	CAN.	6200	3/27/85	26	5.3	4.1	9.7
FERNIE	CAN.	3500	3/28/85	28	9.1	.0	8.0
FERNIE EAST(NEW)	CAN.	4100	3/28/85	46	15.0	8.7	15.6
FERNIE NE	CAN.	3500	3/28/85	36	12.1	3.7	10.6
FIDELITY MTN.	CAN.	6100	3/26/85	99	39.5	42.0	51.0
FIELD	CAN.	4200	3/29/85	22	6.3	--	6.1
FLOE LAKE	CAN.	6860	3/27/85	67	22.5	23.2	30.9
GLACIER	CAN.	4100	3/26/85	62	22.8	22.7	30.4
GRAY CK. LOWER	CAN.	5100	3/28/85	57	18.0	16.7	19.1
GRAY CK UPPER	CAN.	6270	3/28/85	79	25.6	27.3	32.2
KICKING HORSE	CAN.	5400	3/29/85	42	12.2	11.3	14.7
KIMBERLEY	CAN.	3810	3/29/85	20	5.0	.0	6.9
LOWER KIMBERELY	CAN.	4500	3/28/85	22	6.4	2.2	7.6
KIMBERLEY MIO.	CAN.	5510	3/28/85	37	10.7	8.0	12.8
UPPER KIMBERLEY	CAN.	7020	3/29/85	48	13.5	13.4	21.1
MARBLE CANYON	CAN.	4990	3/29/85	40	6.9	7.8	14.4
MORRISSEY RIDGE	CAN.	6100	3/27/85	71	27.6	20.2	29.4
MOUNT ABBOT	CAN.	6500	3/26/85	99	36.0	40.4	50.9
MT ASSINIBOINE	CAN.	7320	3/27/85	52	15.6	17.1	21.3
MOUNT JOFFRE	CAN.	5740	3/27/85	43	12.3	9.9	15.4
MOYIE MTN	CAN.	6400	3/29/85	50	16.5	12.8	19.4
SINCLAIR PASS	CAN.	4500	3/28/85	19	3.8	3.1	5.5
SULLIVAN MINE	CAN.	5090	4/02/85	35	10.4	6.7	13.9
THUNDER CREEK	CAN.	6600	3/27/85	35	8.1	7.7	11.5
UPPER ELK RIVER	CAN.	4400	3/30/85	17	5.9	.0	5.8
VERMONT CREEK	CAN.	4990	3/27/85	43	13.4	--	19.4

IDAHO

BEAR MOUNTAIN		5400	3/25/85	138	56.7	41.1	62.9
BEAR MTN	SNOTEL	5400	4/01/85	---	60.7	--	--
BIG SPRINGS		6400	3/26/85	60	18.7	17.8	21.9
BLACK CANYON		7960	4/01/85	---	32.2E	29.8	35.8
BLACK MOOSE		8160	4/01/85	---	35.7E	29.0	40.6
BLUE LEGGE MINE		6900	3/30/85	59	14.4	16.0	17.5
CAMP CREEK		6580	3/29/85	46	10.8	9.2	11.5
CRAB CREEK	SNOTEL	6860	4/01/85	---	15.5	--	--
GOAT LAKE		6500	3/28/85	123	45.3	33.3	47.7
HUMBOLDT GULCH		4250	4/01/85	52	17.8	9.0	--
HUMBOLDT GLCH	SNOTEL	4250	4/01/85	---	16.0	--	--
ISLAND PARK		6290	3/26/85	54	17.1	16.0	17.4
ISLAND PARK	SNOTEL	6290	4/01/85	---	17.0	--	--
KILGORE		6320	3/30/85	41	11.0	13.7	11.8
KIT CARSON PASTURE		4950	3/26/85	29	6.6	9.0	9.4
LATHAM SPRINGS		7630	3/25/85	76	24.2	25.5	31.4
LOLO PASS		5240	3/29/85	71	29.8	20.8	31.8
LOLO PASS	SNOTEL	5240	4/01/85	---	30.4	--	--
LOOKOUT		5140	3/28/85	101	37.9	25.4	36.3
LUCKY DOG		6860	3/25/85	67	22.6	23.4	25.9
MOOSE CREEK		6200	3/26/85	53	15.8	19.2	16.8
MOOSE CR	SNOTEL	6200	4/01/85	---	10.0	--	--
MOSQUITO RIDGE		5200	4/02/85	98	39.4	28.2	38.9
MOSQUITO	SNOTEL	5200	4/01/85	---	41.0	--	--
SAVAGE PASS		6170	3/28/85	76	25.9	21.5	28.4
SAVAGE PASS	SNOTEL	6170	4/01/85	---	27.2	--	--
SAWTELL MOUNTAIN		8720	3/26/85	100	34.1	34.9	35.9
SMITH CREEK		4800	3/29/85	106	41.6	35.5	47.2
SUNSET		5540	4/02/85	82	30.0	22.6	34.3
TARGHEE PASS		6980	4/01/85	---	15.0E	12.8	16.4

SNOW COURSE	ELEVATION	DATE	SNOW DEPTH	WATER CONTENT	LAST YEAR	AVERAGE 1961-80
VALLEY VIEW	6680	3/26/85	54	16.8	14.3	18.0
WHITE ELEPHANT	7710	3/26/85	73	23.2	23.1	26.3
WHITE ELEPHANT SNTL	7710	4/01/85	---	25.9	--	27.2



# Columbia River Drainage

## STREAMFLOW FORECASTS

APRIL 1, 1985

BASIN, STREAM and/or FORECAST POINT	THIS YEAR		PAST RECORD		THIS YEAR		PAST RECORD		THIS YEAR		PAST RECORD	
	FORECAST		THOUSAND ACRE FEET		FORECAST		THOUSAND ACRE FEET		FORECAST		THOUSAND ACRE FEET	
	Thousand Acre Feet	Percent of Average	Last Year	Average	Thousand Acre Feet	Percent of Average	Last Year	Average	Thousand Acre Feet	Percent of Average	Last Year	Average
PERIOD	APRIL - SEPTEMBER				APRIL - JULY				APRIL - JUNE			
KOOTENAI RIVER below Libby Dam (1)	5,910	84	5,466	7,041	5,050	84	4,520	6,020				
FISHER RIVER near Libby	272	103		264	258	104		248				
RAK RIVER near Troy	470	90		523	450	90		500				
KOOTENAI RIVER at Leona (1)	7,420	86	6,534	8,602	6,470	86	5,596	7,498	5,200	86	4,282	6,051
INFLOW MOULTON RESERVOIR nr Butte (Million Gallons)					230	87	182	263	208	88	179	237
WARM SPRINGS CREEK AT MEYERS DAM near Anaconda (2)	38.4	82		46.8	31.0	82		37.8				
FLINT CREEK near Southern Cross (3)	15.1	83	26.3	18.3	12.8	83	21.3	15.4				
FLINT CREEK below Boulder Creek (4)	61.4	81		75.8	48.5	81		59.5				
INFLOW LOWER WILLOW CREEK RESERVOIR near Hall (5)	11.8	75	11.6	15.7	11.2	74	10.2	14.9				
MIDDLE FORK ROCK CREEK near Philipsburg	65.1	83		78.2	58.7	83		70.5				
NEVADA CREEK near Finn	19.3	84		23.0	18.1	84		21.3				
BLACKFOOT RIVER near Bonner	850	85		999	770	85		904	670	86		782
CLARK FORK RIVER above Milltown (6)	670	82		816	575	81		708	490	82		597
CLARK FORK RIVER above Missoula	1,520	84	1,565	1,815	1,370	85	1,360	1,612	1,175	85	880	1,379
WEST FORK BITTERROOT RIVER near Conner (7)	148	83		178	138	84		164				
BITTERROOT RIVER near Darby	490	84		580	450	85		532	395	85		464
SKALWAGO CREEK near Hamilton	46.5	83		56.0	40.4	83		48.7				
BURNT FORK CREEK near Stevensville (8)	31.0	83		37.4	26.8	83		32.2				
BITTERROOT RIVER at Missoula (9)	1,250	83		1,504	1,150	83		1,384	990	83		1,191
CLARK FORK RIVER below Missoula	2,770	83		3,319	2,495	83		2,996	2,150	84		2,570
CLARK FORK RIVER at St. Regis	3,770	85	3,732	4,411	3,410	86	3,322	3,928	2,950	86	2,825	3,428
NORTH FORK FLATHEAD RIVER near Columbia Falls	1,743	91		1,913	1,580	91		1,732	1,340	91		1,471
MIDDLE FORK FLATHEAD RIVER near West Glacier	1,760	94	1,316	1,869	1,620	95	1,236	1,713	1,390	96	1,086	1,453
SOUTH FORK FLATHEAD RIVER near Columbia Falls (10)	2,160	95	1,515	2,278	2,034	95	1,694	2,142	1,790	95	1,416	1,886
FLATHEAD RIVER at Columbia Falls (10)	5,770	93	4,738	6,208	5,390	94	4,294	5,721	4,690	95	3,589	4,921
SWAN RIVER near Big Fork	645	94		689	570	94		604				
FLATHEAD RIVER near Polson (11)	6,800	93	5,586	7,278	6,200	93	5,102	6,712	5,350	92	4,284	5,759
CLARK FORK RIVER near Plains (11)	11,000	91	9,695	12,153	10,000	90	8,914	11,071	8,510	90	7,457	9,459
THOMPSON RIVER near Thompson Falls	250	96		261	225	97		233				
PROSPECT CREEK at Thompson Falls	142	100		142	132	100		132				
CLARK FORK RIVER at Whitehorse Rapids (12)	12,400	91		13,575	11,300	91		12,351	9,620	91		10,570

- (1) Adjusted for storage in Lake Kootenai.  
(2) Adjusted for storage in Silver Lake, diversions to and pumping from Georgetown Lake.  
(3) Adjusted for storage in Georgetown Lake, diversions from and pumping to Silver Lake.  
(4) Sum Flint Creek at Maxville and Boulder Creek at Maxville.  
(5) Sum of North Fork Lower Willow Creek near Hall and South Fork Lower Willow Creek near Hall.  
(6) Difference in observed flow Clark Fork above Missoula and Blackfoot near Bonner.

- (7) Adjusted for storage in Painted Rocks Reservoir.  
(8) Adjusted for diversion into Sunset Highline Canal.  
(9) Difference in observed flow Clark Fork above and below Missoula.  
(10) Adjusted for storage in Hungry Horse Reservoir.  
(11) Adjusted for storage in Hungry Horse Reservoir and Flathead Lake.  
(12) Adjusted for storage in Hungry Horse Reservoir, Flathead Lake and Noxon Rapids Reservoir.

ALL FORECASTS PREPARED IN COOPERATION WITH THE NATIONAL WEATHER SERVICE

## SUMMARY of SNOW MEASUREMENTS

(COMPARISON WITH PREVIOUS YEARS)

RIVER BASIN and/or SUB-BASIN	Number of Courses Averaged	THIS YEAR'S SNOW WATER AS PERCENT OF	
		Last Year	Average
East Kootenay/BC.	24	117	79
Kootenai/Montana	31	168	98
Kootenai above Bonners Ferry...	55	148	91
Little Bitterroot	9	204	109
N. Fk. Flathead..	13	134	92
M. Fk. Flathead..	13	145	94
S. Fk. Flathead..	13	111	99
Swan .....	11	104	97
Flathead .....	58	124	96
Stillwater & Whitefish.....	9	141	90
Clark Fork above Blackfoot .....	46	101	85
Blackfoot .....	22	124	87
Upper Clark Fork above Missoula ..	68	108	86
Bitterroot .....	21	106	86
Lower Clark Fork below Missoula ..	20	147	100
Clark Fork (Total w/o Flathead)...	109	119	90
Pend O'Reille (Clark Fork & Flathead) .....	167	121	93
Columbia (Pend O'Reille & Kootenai) .....	222	127	92

## Northern drainages

### near average

Near to a little below average is forecast for the Kootenai and Flathead River drainages. On the Clark Fork headwaters, streamflows are predicted to be a little lower and generally in the 80 to 85 percent of average range.

Low elevation snowmelt water is beginning to appear in the streams and rivers.

Some mid- and late season shortages of irrigation water are anticipated in the Bitterroot, Clark Fork and Blackfoot River drainages, particularly on the smaller streams.

## WATER SUPPLY OUTLOOK

Expressed as "Poor, Fair, Average, Excellent" With Respect to Usual Supply.

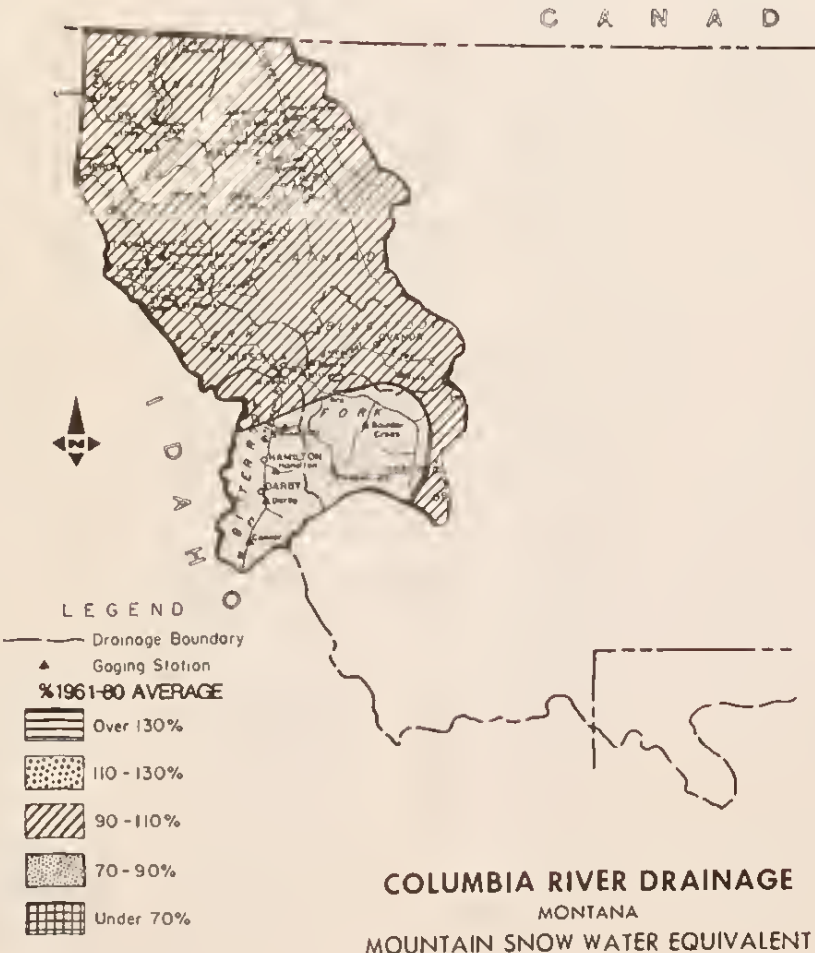
STREAM or AREA	Flow Period	
	Spring Season	Late Season
Tobacco .....	Avg	Avg
Little Bitterroot....	Avg	Avg
Mission Valley .....	Avg	Avg
Flint Creek .....	Avg	Fair
Upper Clark Fork ....	Avg	Fair
Nevada Creek .....	Avg	Avg
Blackfoot .....	Avg	Fair
West-side Bitterroot	Avg	Fair
East-side Bitterroot	Avg	Fair
Bitterroot River ....	Avg	Fair
Lower Clark Fork ....	Avg	Avg

## Most of Columbia

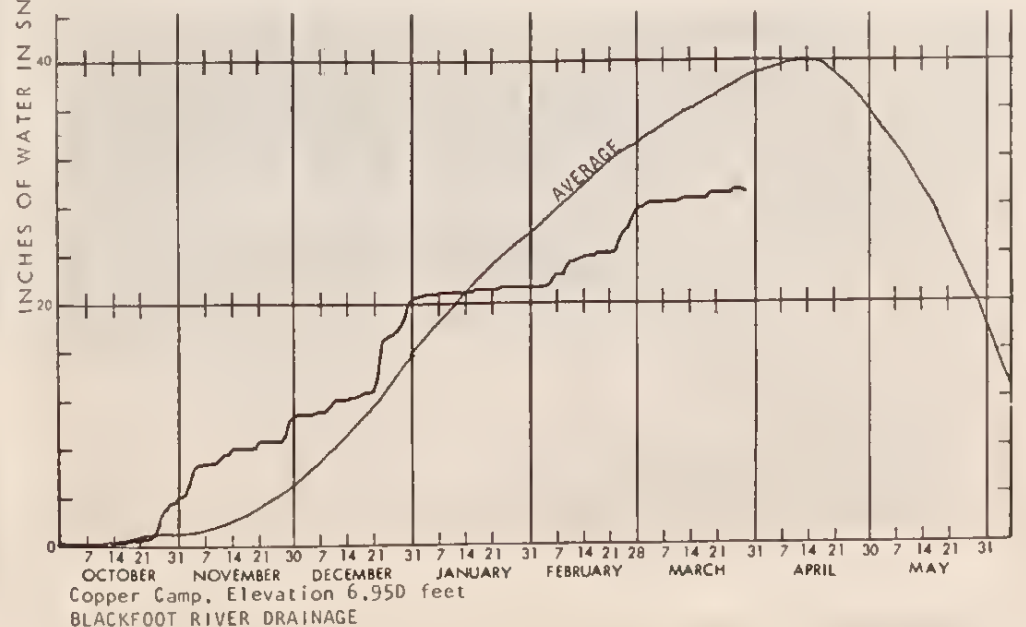
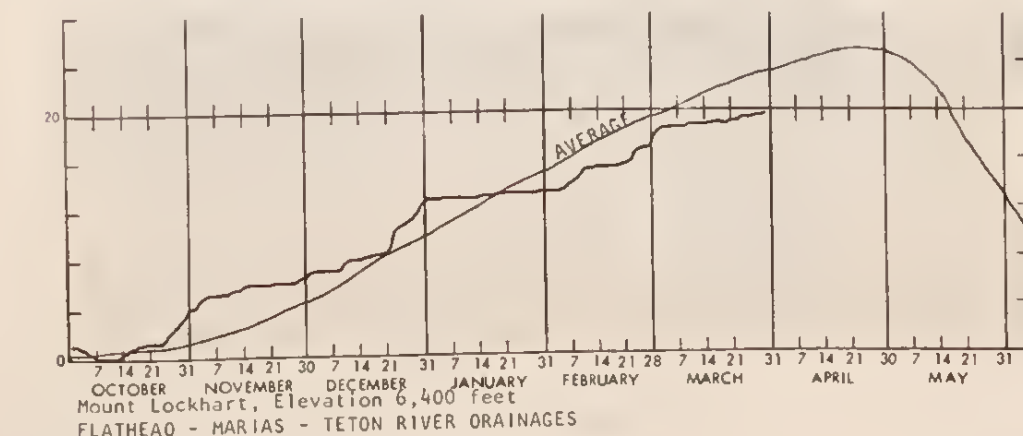
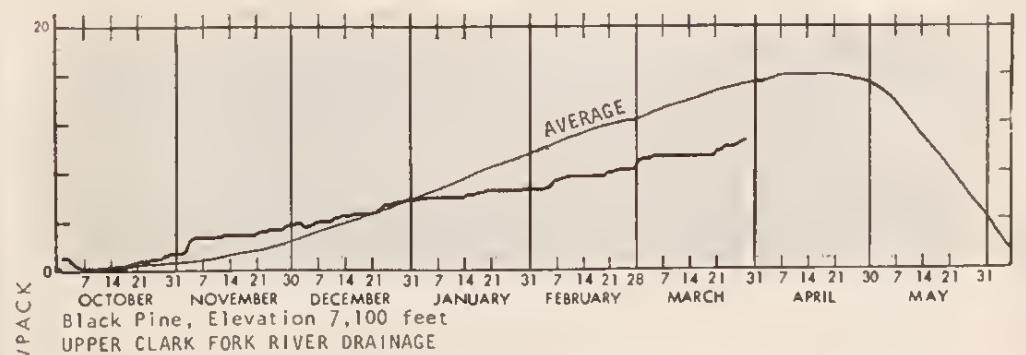
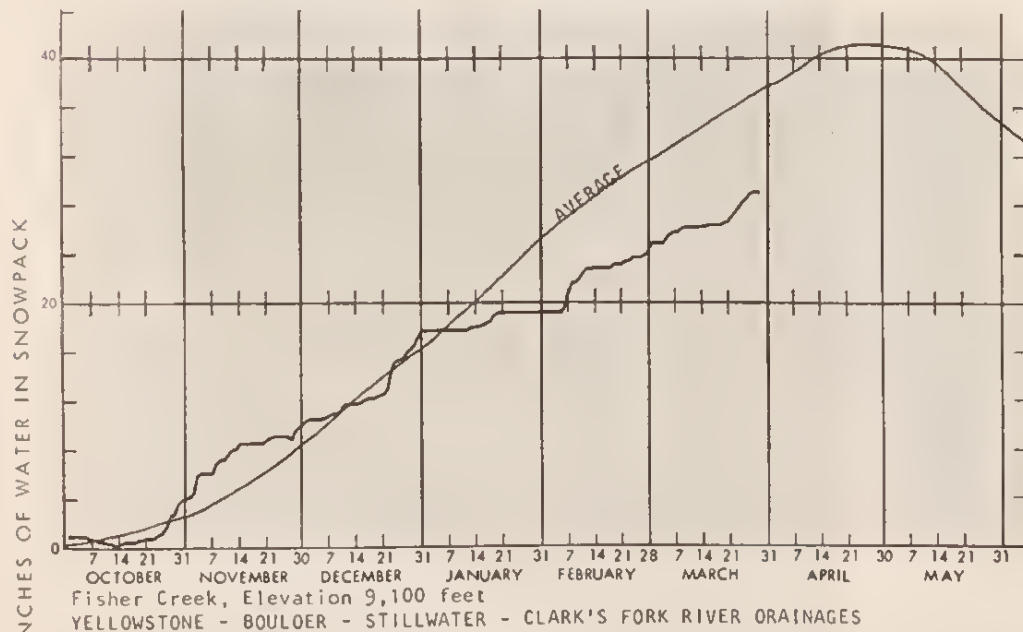
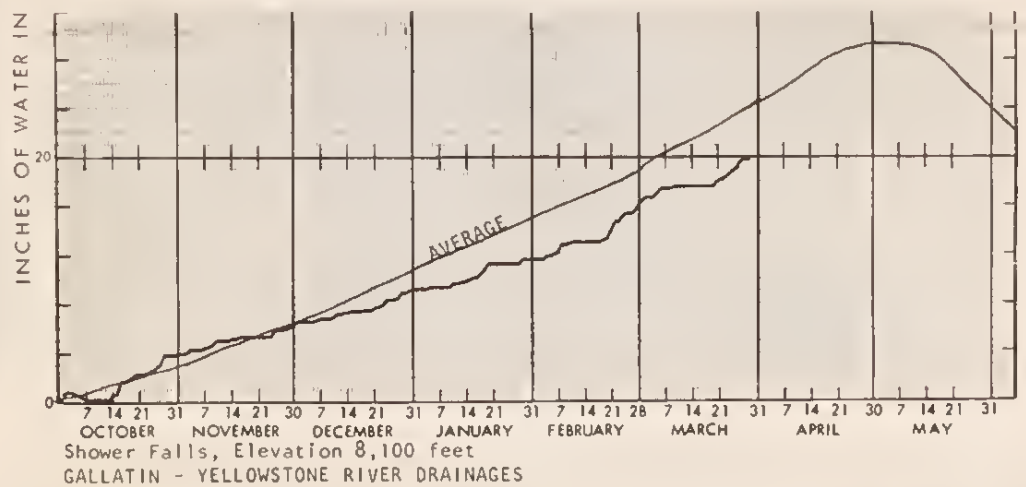
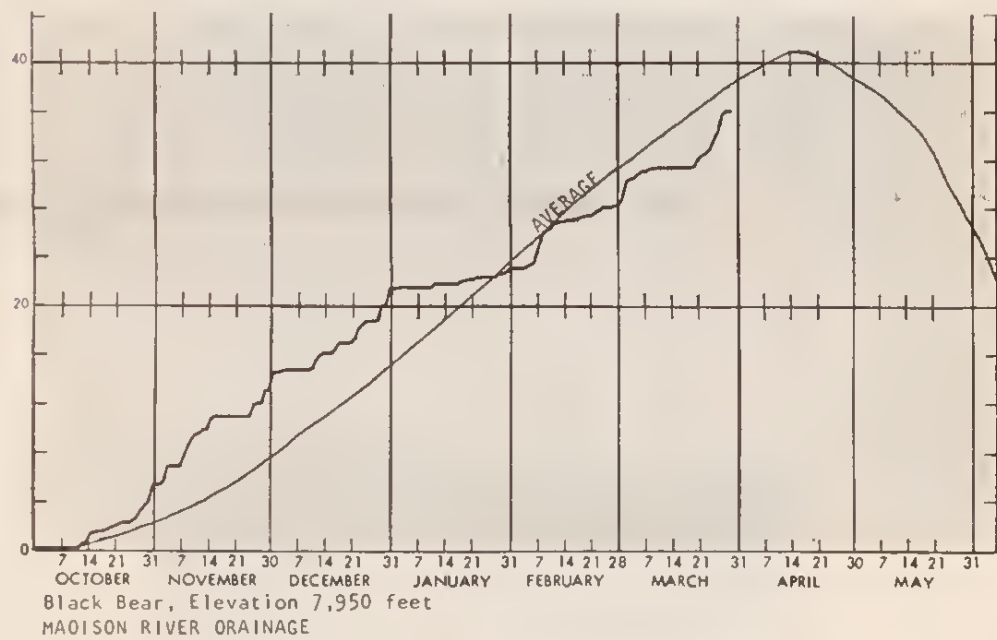
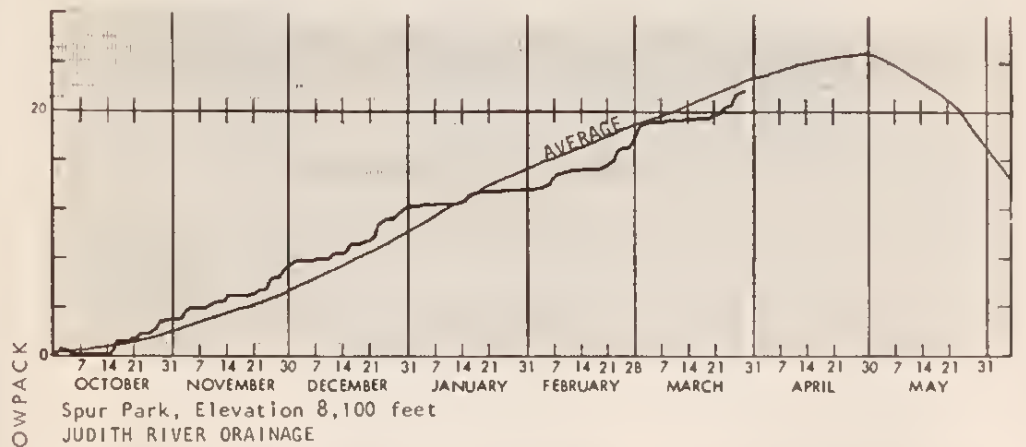
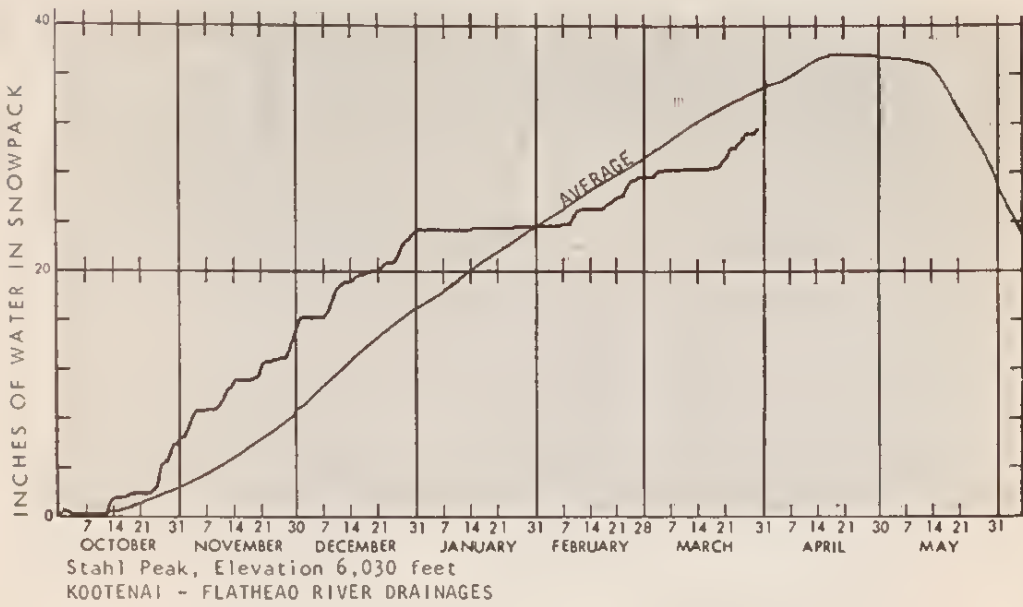
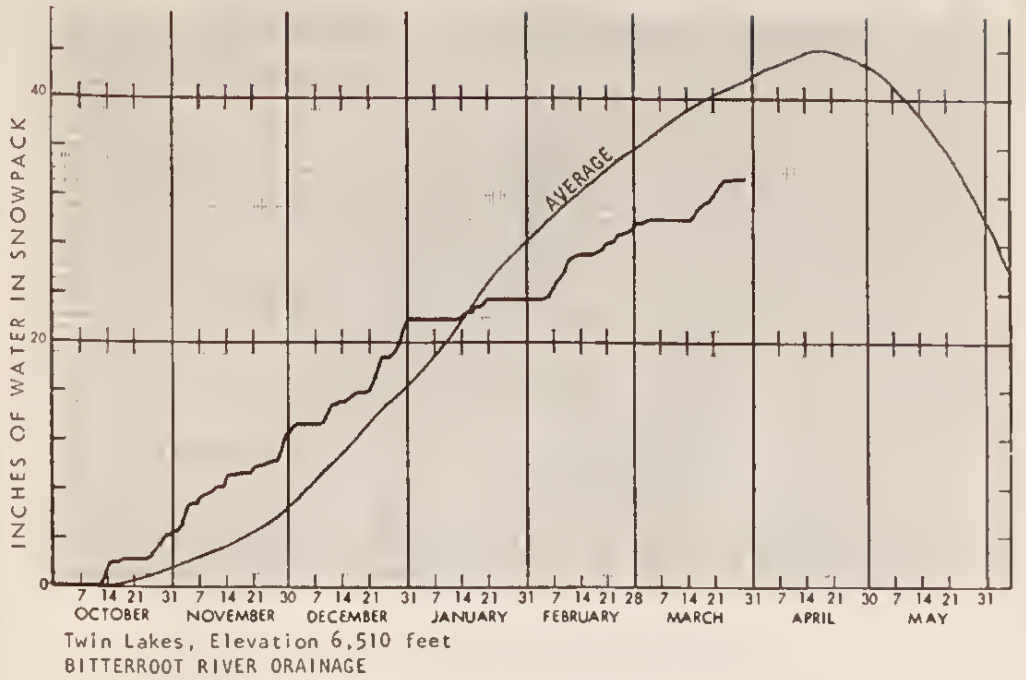
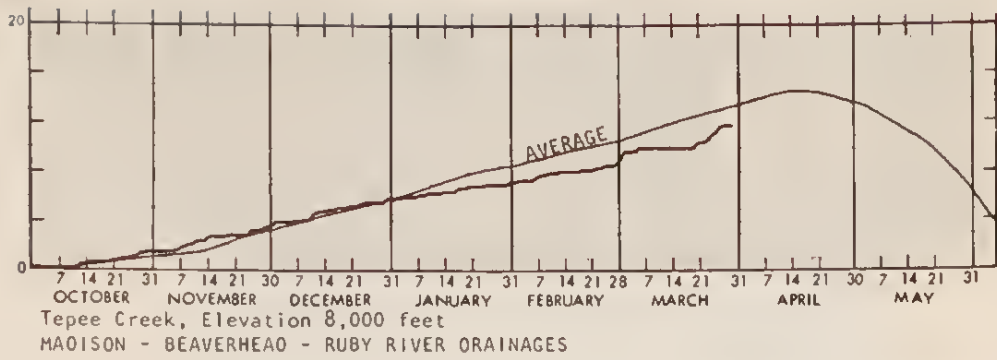
### near average

Most of the Columbia River headwaters in Montana have near average snow water content. The Bitterroot and Clark Fork River above the Blackfoot still show below average snowpack. In these areas the water stored in the snow is about 85 percent of average.

Some melt started in the lower elevations near the end of March.



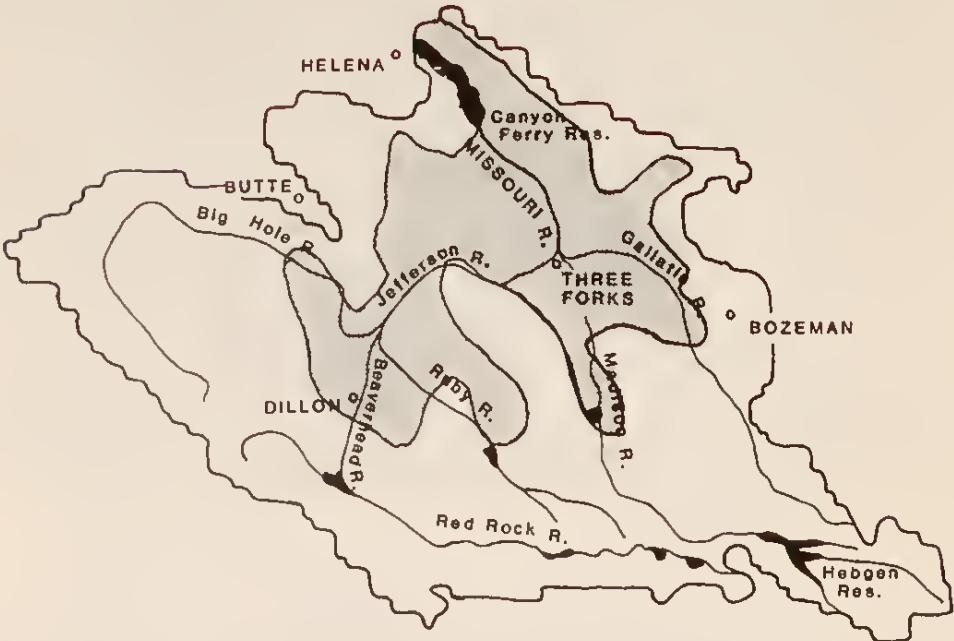
# SNOW PILLOW DATA





# SATELLITE SNOW COVER

DATA PROVIDED BY NOAA/NWS



 Snow Covered Area  
 April 2, 1985

Scale 1:2,500,000

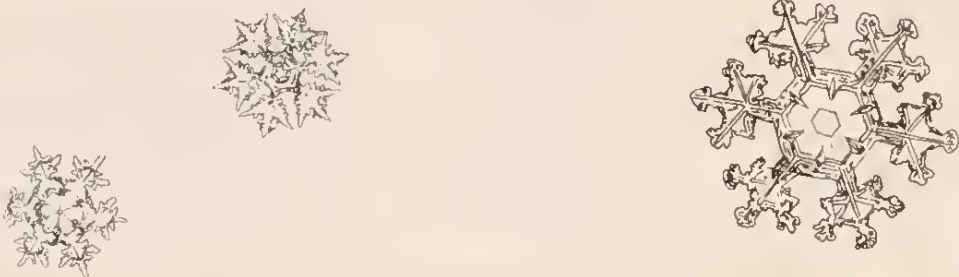
## MISSOURI RIVER BASIN Above Canyon Ferry Dam

DATE	PERCENT SNOW COVER	AVERAGE SNOWLINE ELEVATION IN FEET
February 25, 1985	100	3800
March 7, 1985	100	3800
March 11, 1985	100	3800
March 14, 1985	97	4180
March 17, 1985	94	4450
April 2, 1985	80	5340

## RESERVOIR STORAGE (Thousand Acre Feet) END OF MONTH March 31, 1985

BASIN OR STREAM	RESERVOIR	USABLE CAPACITY	USABLE STORAGE		
			THIS YEAR	LAST YEAR	AVERAGE
COLUMBIA					
Kootenai	Koocanusa	5,748.2	1,801.0	2,513.0	1,694.0
Flathead	Hungry Horse	3,451.0	1,796.0	2,074.0	2,054.0
	Flathead Lake	1,791.0	649.3	682.4	762.0
	Camas (4)	45.2	18.0	30.2	23.1
	Mission Valley (8)	100.3	37.6	58.0	41.1
Clark Fork	Georgetown Lake	31.0	24.8	27.2	23.7
	Lower Willow Creek	4.9	1.3	3.6	1.8
	Nevada Creek	12.6	4.1	8.1	7.4
	Noxon Rapids	334.6	156.2	322.3	197.6
Bitterroot	Painted Rocks	31.7	---	---	16.6
	Como	34.9	10.1	20.5	14.6
MISSOURI					
Beaverhead	Lima	84.0	31.9	54.8	38.0
	Clark Canyon	257.2	151.8	181.0	147.6
Ruby	Ruby	38.8	33.3	34.6	30.3
Madison	Hebgen Lake	377.5	297.0	261.7	233.6
	Ennis Lake	41.0	32.3	39.0	35.0
Gallatin	Middle Creek	8.0	3.7	3.9	3.9
Missouri	Canyon Ferry	2,043.0	1,394.0	1,574.0	1,498.0
	Hauser & Helena	61.9	62.4	63.0	60.0
	Helena Valley	9.2	3.2	3.7	4.9
	Lake Helena	10.4	10.7	10.9	9.8
	Holter Lake	81.9	78.1	79.6	64.9
	Fort Peck Lake	18,910.0	15,720.0	16,010.0	15,040.0
Smith	Smith River	10.6	9.6	10.8	7.6
	Newlan Creek	12.4	9.0	8.7	9.1
Musselshell	Sair	7.0	1.2	3.8	5.2
	Martinsdale	23.1	4.8	15.1	9.6
	Deadman's Basin	72.2	48.0	63.6	49.7
Sun	Gibson	99.1	55.2	58.6	46.2
	Willow Creek	32.2	13.4	24.4	22.1
	Pishkun	32.0	18.5	19.3	18.2
Marias	Lower Two Medicine	11.9	---	---	8.0
	Four Horns	19.2	---	---	12.6
	Swift	30.0	10.7	14.4	16.8
	Lake Frances	111.9	24.8	47.6	71.2
	Elwell (Tiber)	1,347.0	680.9	693.1	562.3
Milk	Beaver Creek	3.5	1.1	3.2	2.1
	Fresno	127.2	16.3*	40.4	86.7
	Nelson	66.8	15.9	40.2	38.7
HUDSON 8AY					
St. Mary's	Lake Sherburne	64.3	31.9	10.5	24.0
YELLOWSTONE					
Stillwater	Mystic Lake	21.0	1.0	1.6	4.2
Clark's Fork	Cooney	27.4	21.7	19.5	15.8
Tongue	Tongue River	68.0	16.2	23.8	41.6
Big Horn	Big Horn Lake	1,356.0	866.7	850.9	607.2

\*NOTE: Fresno Reservoir storage on 2/28/85 was listed as 75.1. The correct storage should have been 7.5.



## AGENCIES AND ORGANIZATIONS COOPERATING IN MONTANA SNOW SURVEYS

### GOVERNMENT AGENCIES

#### Canada

- Department of the Environment
- Atmospheric Environment Service
- Water Management Service
- British Columbia Ministry of Environment
- Inventory and Engineering Branch, Hydrology Section
- Alberta Environment
- Technical Services Division

#### Federal

- Department of the Army - Corps of Engineers
- Department of Agriculture - Forest Service
- Department of Commerce - National Environmental Satellite Service
- Department of Interior - National Weather Service
- Department of Interior - Bureau of Indian Affairs
- Department of Interior - Fish and Wildlife Service
- Department of Interior - Geological Survey
- Department of Interior - National Park Service
- Department of Interior - Bureau of Reclamation
- Department of Energy - Bonneville Power Administration

### STATE AGENCIES

- Montana Conservation Districts
- Montana Department of Fish, Wildlife and Parks
- Montana Department of Natural Resources and Conservation
- Montana State University - Agricultural Experiment Station
- University of Montana - School of Forestry

### PRIVATE ORGANIZATIONS

- The Anaconda Company
- Big Sky of Montana
- Butte Water Company
- Flathead Valley Community College
- Montana Power Company
- Pondera County Canal & Reservoir Company

Other organizations and individuals furnish valuable information for snow survey reports. Their cooperation is gratefully acknowledged.



Snow should continue to accumulate at high elevations throughout April.